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# Identification and comparison of genetic pattern of human and cattle *M.bovis* isolates from Zanjan province, by restriction fragment length polymorphism and DNA hybridization

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## ABSTRACT

**Background/objective:** *Mycobacterium bovis*, responsible for bovine tuberculosis is a member of *Mycobacterium tuberculosis* complex. This bacterium is responsible for infection in wide range of hosts. Bovine tuberculosis is well known as Zoonotic tuberculosis in human and is transmitted via consumption of unpasteurized milk, contaminated meat products and also by ingestion of *Mycobacteria* from the environment. The objectives of the present study was to compare the genomic pattern of *M. bovis* obtained from human subjects in Zanjan province, with those of atypical cattle in Iran by Restriction fragment length polymerization and DNA hybridization methods.

**Methods:** DNA was isolated from 2 *M. bovis* strains isolated from suspected patients by van Sooligen method. Finger printing methods using RFLP and DNA hybridization with probes DR and PGRS was performed. The obtained patterns were compared with the genomic pattern of 161 *M. bovis* strains isolated from infected cattle lymph nodes, present in the Tuberculin reference Laboratory at Razi vaccine and Serum Research Institute, Karaj.

**Results:** Comparisons of the genetic pattern of the 2 *M. bovis* strains from Zanjan province with 16 distinct patterns obtained with PGRS probe and 20 patterns with DR probes from 161 *M. bovis* isolates indicated no correlation of the patterns of Zanjan isolates with those present at Razi Tuberculin Reference Laboratory.

**Conclusion:** With respect to the age of patients, absence of epidemic and lack of cluster in the mentioned province and other provinces, our results indicate recurrence of the infection due to *M. bovis* isolates which were present in Zanjan province in previous years. These isolates had no association with the bovine tuberculosis isolates present in Razi Tuberculin Reference laboratory.

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**Conflict of interest**

There is no conflict of interest to declare.